Hollis, New Hampshire
Sub-surface Disposal Systems
Contact: Jeremy Ginsberg
Nashua Regional Palnning Commission
(603)883-0366
Zoning Ordinance
Adopted 1987
Revised 1989
Court Challenged: no

OFFICE of SELECTMEN
Town of Hollis
P.O. box 509
Hollis, New Hampshire 03049

AMENDMENT TO SUB-SURFACE DISPOSAL SYSTEM REGULATIONS

The Town of Hollis Board of Health at its meeting on April 6, 1987 voted to amend the regulations governing the installation, alteration and inspection of sewage disposal systems for the health and welfare of the citizens of Hollis (adopted May 26, 1986) with the following:

Page 1 - PERCOLATION TESTS - after No. 3 add:

4. Percolation tests will not be performed from December 20 to March 15.

5. Lot lines to be identified by flags.

6. Field engineer or surveyor to verify that the location of perc tests as indicated on septic plan are accurate.

Page 2 ~ - DEEP OBSERVATION HOLES - after No. 2 add:

3. Deep observation holes will not be performed from December 20 to March 15.

4. Lot lines to be identified by flags.

5. Field engineer or surveyor to verify that the location of deep observation holes as indicated on septic plan are accurate.

Page e 4 - INSPECTION PROCEDURE FOR DISPOSAL SYSTEM INSTALLATION after No. 3 add:

4. Installation of disposal systems will not be allowed between December 20 and March 15 unless an emergency exists relating to a failed system, in which case the installation will be allowed with the stipulation that it be completed in one day. A layer of hay to be placed over completed bed to retard frost until State Inspector completes his inspection.

(Note: Complete Sub-surface System Disposal Regulation. available in the Hollis Town Hall)

Effective 4/6/87

NOTICE

The Town of Hollis Board of Health, at its meeting on May 26, 1987, formally adopted under the authority of RSA 147.1 and 10 new regulations governing the installation, alteration and inspection of sewage disposal systems for the health and welfare of the citizens of Hollis. They were adopted as a supplement to Chapter Ws1000, Subdivision and Individual Sewage Disposal System Design Rules. These new regulations will become effective Monday, June 16, 1986.

The newly appointed Assistant Building Inspector, Robert Rimbach, is in charge of all inspections and compliance requirements of these new regulations. Mr Rimbach's office hours in the Town Hall will be Monday 8 am to 4 pm and Wednesday 8 am to 1 pm by appointment only. appointments may be made through Ruth Clark, secretary in the building Inspector's Office.

A copy of these new regulation and fee schedule is being sent to you with this notice. Additional copies may be obtained from Ruth Clark in the Building Inspector's Office. Selectmen of Hollis

SUB-SURFACE DISPOSAL SYSTEMS

FEE SCHEDULE

TO BE PAID AT TIME OF appointment

Effective Date: June 16, 1986

Residential- New $185.00 This includes on e office visit and four on site inspections

replacement $90.00 This includes one office visit and two on site inspections

Industrial/Commercial All installation requiring a leach field in excess of 1,750 square feet or 290 square feet per 100 gallons will be charged at the rate of $185.00 plus $35.00 for each increment of 250 square feet over 1,750 square feet.

ON-Site Inspection Procedure

1. Make appointment with Assistant building inspector (465-2209) for witnessing of deep test holes and percolation tests.
2. Bed to be inspected prior to installation of system.
3. Pipe in d-box to be inspected before stone housing has been installed.

4. System inspected in conjunction with State.

PURPOSE: Under the authority of RSA 147.1 and 10, the following regulations for governing the installation, alteration, inspection of sewage disposal systems for the health and welfare of the citizens of Hollis are hereby adopted as a supplement to Chapter Ws 100, Subdivision and Individual Sewage Disposal System Design Rules.

1. A representative of the Town of Hollis shall witness all percolation and deep observation holes that will be used in the design calculations of subsurface disposal systems.

PERCOLATION TESTS:

1. At least two (2) percolation tests shall be performed at the site of each disposal area in the soil to be used for leaching. Addition tests will be required where the soil structure varies or where large disposal areas are required.

2. Percolation s tests shall not be made in holes that have remained open to the atmosphere for more than twenty four hours, nor shall they be made in frozen soil. Percolation tests may be performed when the elevation of the soil to be tested is below the frozen soil layer.

3. Any soil or material which has a percolation rate of slower than thirty (30) minutes per inch is considered to be impermeable and unsuitable for soil absorption disposal systems.

DEEP OBSERVATION HOLES
1. On any lot, in the area to be used for leaching except as noted below, there will be at least two (2) deep observation holes plus any additional number which, in the opinion of the approving Authority, will be necessary to determine the consistency (or lack thereof) of the character of the soil. The observation holes shall be examined to a depth of alt least four (4) feet below the bottom of the proposed leaching facility, but in no case shallower than ten feet, unless this depth is unattainable because of bedrock, etc. The ground water elevation should be determined when the ground water is at its maximum elevation. EXCEPTION: in cases where three or more contiguous single family lots are being examined at the same time, by the same engineer, the requirement of two deep observation holes per lot is reduced to one deep observation hole per lot,
provided that the character of soils remain consistent in the opinion of the approving authority. The deep observation hole shall be conducted in the area to be used for leaching on each lot. One deep observation hole shall be required in the reserve area.

2. Deep observation holes will be allowed between March 15 and May 15 only, unless a qualified soil scientist as listed by USSCS is rehired by the owner or contractor to verify seasonal high water table.

USSCS (UNITED STATES SOIL CONSERVATION SERVICE) DATA:
1. If the site is properly mapped (as determined by comparing the actual soil profile description give

by the USSCS mapped soil of the site), the SHWT (seasonal high water table) shall be within the range specified by the USSCS for that soil type. IF the site appears to be incorrectly mapped, the USSCS shall be contacted to provide an on-site survey to verify the correct soil type that exists on the site.

2. If the above factors are not adequately definitive, or disagreement exists between the official of the Town of Hollis and the waste disposal system designer or his representative, the USSCS shall be contacted to provide an on-site survey to determine the SHWT for that site. This determination by the USSCS shall be considered final.

PERCOLATION TEST PROCEDURES:

a. Prepare a test hole into the proposed leaching state within the disposal area of twelve (12) inches in diameter with vertical sides eighteen (18) inches deep in receiving layer.
b. Establish a fixed point at the top of the test hole from which all measurements can be taken.

c. scratch the bottom and sides of the test hole to remove any smeared soil surfaces. Either add two inches of coarse sand to protec the bottom from scouring, or insert a board or other impervious object in the hole so that water may be poured down or on it during the filling operation.
d. Carefully fill the hole with clear water to a minimum depth of twelve (12) inches and maintain the water level by adding water as necessary for purpose of soil saturation, but in no case
less than fifteen minutes after first filling the hole.

e. After saturation, if the water level drops to a depth of nine inches in less than thirty minutes, measure the length of time in minute for it to drop from a depth of nine inches to a depth of six inches. If the rate is erratic in the opinion of the Approving Authority, the hole shall be refilled and soaked until the drop per drop per increment of time is stead. The time for the level to drop from a depth of nine inches to depth of six inches divided by three, will be the percolation rate in minutes per inch.

f. If the initial three inch drop requires more than thirty minutes (rate equal to more than ten minutes per inch) the soil shall be saturated by filling the hole to the top and maintaining it full for at least four hours. The soil should then be permitted to swell overnight so that the soil conditions will approach those which exist during the wettest season of the year. After the overnight swelling period, the test shall be made again by filling the hose to a twelve inch depth and maintaining that level for fifteen minutes, letting the level drop to nine inches, then timing the drop between nine inches and six inches. The time elapsed between nine inches and six inches, divided by three, shall be the percolation rate.

g. In certain soils, particularly coarse sands, the soil is so pervious as to make the percolation tests as described as difficult, impractical, and meaningless. Therefore, at the discretion of the approving authority, the test as described above may be waived and a rate of two minutes per inch can be assumed proved that at least twenty-four gallons of water is added to the percolation

holes within fifteen minutes and it is impossible to obtain a liquid depth of nine inches or the percolation rate is faster than thirty seconds per inch.

GREASE TRAPS:

1. Installation - Grease traps must be provided at installations such as restaurants, nursing homes schools, hospitals, or other installations from which large quantities of grease can be expected to be discharged.

2. Location- Grease traps shall be installed on a separate building sewer serving that part of the plumbing system into which the grease will be discharged. The discharge form the grease rap must flow to a properly designed septic tank or a building sewer prior to the septic tank.

3. capacities- Grease traps shall have a minimum depth of four feet and a minimum capacity of 100 gallons, and shall have sufficient capacity to provide at least a twenty-four hour detention period for the kitchen flow. construction- Grease traps shall be watertight and constructed of sound and durable materials not subject excessive corrosion, decay, or frost damage, or to cracking or buckling due to settlement or backfilling. Tanks and covers shall be designed and constructed so as to withstand normal structural loadings. A tank installed in ground water shall be weighted to prevent the tank from floating when it is emptied.

5. Depth of Tees- The inlet tee shall extend to the mid depth of the tank. The outlet tee shall extend to within twelve inches of the bottom of the tank. Tees shall be cast iron of Schedule 40 PVC and properly supported by a hanger, strap or other device.

6. Baffles- Baffles may be provided as necessary to maximize the separation of grease from the sewage. baffles may not be considered a substitute for the inlet and outlet tees.

7. Base Grease traps shall be installed on a level stable base that will not settle.

8. Materials- grease traps may be constructed of poured reinforced concrete, precast reinforced concrete, or prefabricated material acceptable to the Approved Authority.

Amendment to subsurface Disposal System Regulations

The Town of Hollis Board of Health, at it meeting on May 24, 1989, voted to amend the regulations governing the installation, alteration and inspection of sewage disposal systems for the health and welfare of the citizens of Hollis (adopted May 26, 1986), with the following:

Page 4: Inspection Procedure for Disposal System Installation:

Item 2 - add sentence as follows: "A ten foot extension will be required around the perimeter of the proposed leaching area."

9. Access manholes- Grease traps shall be provided with a minimum twenty -four inch diameter manhole frame and cover to grade over the inlet and outlet.

10. Accessibility- grease traps shall be located on the lot so s to be accessible for servicing and cleaning.

11. Invert Elevation - The invert elevation of the inlet of a grease trap shall be at least two inches above the invert elevation of the outlet. Inlet and outlet shall be located at the center line of the tank, and at least twelve 12 inches above the maximum ground water elevation.

12. Backfill- Backfill around the grease trap shall be placed in such a manner as to prevent damage to the tank.

13. Cleaning - Grease traps shall be inspected monthly and shall be cleaned when the level of grease is twenty-five percent of the effective depth of the trap or at least every three months.

INSPECTION PROCEDURE FOR DISPOSAL SYSTEM INSTALLATION:

1. the Board of Selectmen or their agent will, within its jurisdiction, inspect the installation of all individual sewage disposal systems and may, at any stage of construction, require necessary modifications, if conditions are encountered that were not originally observed. In order to facilitate timely inspection, the installer shall provide a reasonable period of notification when requesting an inspection and the inspection shall be performed withing a reasonable period of time by the approving authority.

2. Inspection of bottom of the leaching areas is required prior to installation of the system.

3. Final inspection will be made in conjunction with New Hampshire Water supply and Pollution control. A five gallon container of water must be available to check distribution box installation.

SEWAGE PUMPS: Ws 1013:

The town of Hollis will require in addition:
a. All pumps shall be equipped with an audible alarm powered by a circuit separate from the pump power.

b. Standby Power: Standby power shall be provided at apartment houses, condominiums, elderly housing and all other premises which are not vacated during power failure.

c. All pumps controls to be moisture proof.

WS 1016.01 - LEACH LINES:
The word "tar" is to be deleted from Section "H', chapter Ws1000, Subdivision and Individual Sewage Disposal System Design rules.

SETBACK:
a. Twenty fool setback, from the side, required for leach and septic systems

b. "leach beds and trenches shall be located at certain minimum distances in the down gradient direction from property lines as shown in the table of set back distances. Perpendicular to the gradient the required minimum distance to a property line is one-half of the distance shown in the table. Up gradient of the leaching bed or trench the minimum distance to a property line is one-quarter the distance shown in the table of setback distances."

SETBACK DISTANCES

Flow, gpd	Minimum Down gradient Distance to Property Line (feet)
1000	50 20' Min. on Up gradient
1500	75 20' Min. on Up gradient
2000	100
2500	125
3000	150
3500	175
3500	200
4000	200
4500	225
5000	250
6000	275
7000	300
8000	320
9000	340
10000	350
15000	435
20000	500

*Represents bed size unless beds are close enough together to influence each other (ie, if bed edges are within the distances shown in the table they are deemed to influence each other).

CERTIFICATE OF COMPLIANCE:
Cross ties to septic tank cover must be submitted on a standard 81/2 x 11 sheet of paper to the approving Authority prior to the issuance of Certificate of compliance.

SEPARABILITY:

The invalidity of any provision shall not effect the validity of any other provision.
Determination of invalidity of any section of this regulation shall not effect the validity of any other.

WHEN EFFECTIVE:
any application received after June 16, 1986 shall conform to these regulations.

ALL PLANS TO BE REVIEWED BY THE HOLLIS BOARD OF SELECTMEN PRIOR TO SUBMISSION TO THE STATE OF NEW HAMPSHIRE

4/29/86 - rev. 5/8/86, 5/27/86, 6/11/86